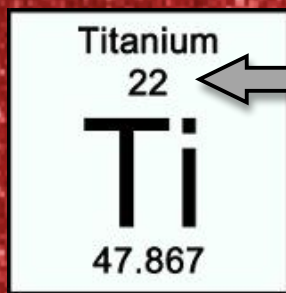


Atomic Structure



Atomic Number

ATOMIC MASS

of Protons in Nucleus= 22

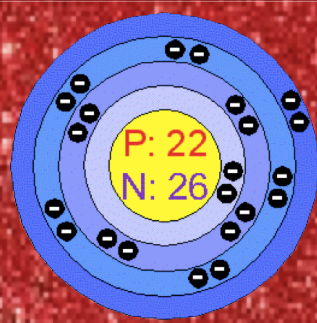
of Electrons within the neutral atom= 22

Most common isotope= 48Ti

of Neutrons within the nucleus of the most common isotope= 26 neutrons

BACKGROUND INFORMATION

In 1791, Reverend William Gregor, an English pastor, discovered Titanium. In 1910, American metallurgist, Matthew A. Hunter, first produced pure Titanium. The name originates from the Greek word "Titans", the mythological "first sons of the Earth". The most common use of Titanium is Titanium oxide (TiO_2), used as a pigment to create white paint. Also, Titanium and titanium alloys, due to their low weight, increased strength, and resistance to high temperatures, are used in airplanes, missiles and rockets. Due to its lack of interaction with the human body, Titanium is used to create pins for setting bones and artificial hips, along with other biological implants.



Bohr Model

Lewis Dot Structure



CHEMICAL PROPERTIES

Physical Properties

State of Titanium at room temperature=solid

Melting Point=1668°C

Boiling Point=3287°C

Density=4.507 g/cm³

Abundance in Earth's crust=0.66%

Nitrogen, Oxygen, and Chlorine all react with Titanium. Titanium oxide (TiO_2) is used as a pigment to create white paint and accounts for the largest use of the element. Pure titanium oxide is relatively clear and is used to create titania, an artificial gemstone. Titanium tetrachloride ($TiCl_4$), another titanium compound, has been used to make smoke screens.

Titanium dioxide accounts for 70% of the total production volume of pigments worldwide. It is widely used to provide whiteness and opacity to products such as paints, plastics, papers, inks, foods, and toothpastes. It is also used in cosmetic and skin care products, and it is present in almost every sunblock, where it helps protect the skin from ultraviolet light. It is one of the top fifty chemicals produced worldwide. In cosmetics, it serves several purposes. Used to remove these impurities, leaving the pure, white pigment available for use, as it is odorless and absorbent.